

## NEW DIMENSIONS OF DEVELOPMENT IN AGRICULTURE

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**A**gricultural sector plays a significant role in any economy. Referring to it as the backbone of the economic system is not an exaggeration. In fact, agricultural sector not only provides food and raw material, but it also provides employment opportunities to a large segment of the population. In India, the main occupation of our working population is agriculture. About 70 per cent of our country's population is directly engaged in agriculture and allied sectors. On the contrary, the proportion of agricultural sector is very low in the economy of developed countries. On an average, it is 5 per cent in the UK, 4 per cent in the US, 14 per cent in France, 16 per cent in Australia, 21 per cent in Japan and 32 per cent in Russia. The high proportion of agriculture sector in Indian economy is due to the fact that non-agricultural sector has not been adequately developed in proportion to the requirement of rapidly growing population.

Agriculture is the main source of our national income. According to the Central Statistics Office

(CSO), the contribution of agriculture and allied sectors in national income during the year 1960-61 was 52 percent. In 2001-2002, the share of agricultural sector in national income was 32.4 percent. Agro-products such as tea, sugar, rice, tobacco and spices contribute significantly in international trade and India exports these products in a big way. The proper development of the agriculture sector leads to increase in exports and reduction in imports. As a result, it helps in balance of payments in favour of the country and also saves foreign currency. These savings can be utilised in the import of more essential items, raw material, machinery, equipment and other infrastructure related items needed for the country. This accelerates the pace of economic development and strengthens the economy of the country.

Efforts have been made, from time to time, to boost the agriculture sector as well as condition of farmers, but the sincere and committed efforts made by the present Government led by Prime Minister Shri Narendra Modi have yielded more positive and encouraging results. With a focus on the agriculture sector, the Government has made adequate budgetary provision for it. For the 5 year period, from 2009 to 2014, the previous Government had made a budgetary provision of Rs. 1,21,082 crore. At the same time, the present Government has made a budgetary provision of Rs. 2,11,694 crore for agriculture sector for the period of five years, from the year 2014 to 2019 which is 74.5% more than the provision made by the previous Government. In addition, two corpus funds have also been constituted for the period from 2017 to 2020. Amount of Rs. 5 thousand crore has been allocated for 'Micro Irrigation



Fund' and Rs. 10,881 crore for 'Dairy Processing and Infrastructure Fund'. In 2018-19 Budget, Rs. 2000 crore have been earmarked for 'Agricultural Market Infrastructure Development Fund', Rs. 7550 crore for 'Fisheries and Aquatic Science Infrastructure Development Fund' and Rs. 2450 crore for "Animal Husbandry Infrastructure Development Fund". In accordance with the recommendations of Prof. M.S. Swaminathan, the Father of Green Revolution in India, the Minimum Support Price has been announced for different agricultural commodities from the Kharif season of 2018-19 which is one and a half times of the cost price or more. NITI Aayog has, in collaboration with the Central and State Governments, set up a new system so that all farmers can get the benefit of this initiative. In addition to promoting pro-farmer initiatives, Government has approved a new umbrella scheme 'Pradhan Mantri Annadata Aay Sanrakshan Abhiyan' (PM-AASHA) keeping in mind their resolve and commitment towards the farmers, the *Annadata*. The objective of this scheme is to provide the peasants reasonable price for their produce. It was announced by the Finance Minister in the Union Budget of 2018. Under this scheme, the Government has already increased the minimum support prices of Kharif crops by adopting the principle of fixing one and a half times the cost of production. Increase in the Minimum Support Price with the co-operation of the State Governments will promote Kharif crops and will lead to an increase the income of the farmers. To improve the economic condition of the farmers, the target of doubling their earnings by 2022 has been set. NITI Aayog has also constituted a Working Group to achieve the goal of doubling the income of farmers through new business models.



To materialize this vision by the year 2022, special attention is being given on increasing productivity, reduction in cost of farming and strengthening the post-harvest management and market structure. With these aims, various market reform-oriented measures have been implemented, such as the Model Agricultural Produce and Livestock Marketing Act, 2017 and Model Contract Farming and Services Act, 2018. Various States have taken necessary steps to adopt them through law.

"Pradhan Mantri Fasal Bima Yojana" (Prime Minister's Crop Insurance Scheme) has been launched from the Kharif season of 2016 to provide safety-shield to farmers against the losses to crops, due to natural calamities. The maximum premium for Kharif crops has been fixed at 2 percent and one and a half percent for Rabi crops. Along with the standing crops, the risks involved before sowing and after harvest, are also included in it. Not only this, payment of 25 percent of the loss claims is being made online immediately. This scheme has been very popular among the farmers. The insured amount per hectare was Rs 17,509 during the last two years of the previous Government, which got enhanced to Rs 38,496, thereby recording an increase of 120 per cent during the two years - 2016-17 and 2017-18 of the present Government. Earlier, insurance claims were being paid at the rate of Rs. 1750 per hectare, which was increased to Rs 3,084 per hectare, indicating an enhancement of 76 per cent. Important changes have also been made in the relief rules for losses due to natural disasters. Now financial assistance is also being provided for 33 per cent of the crop loss. Apart from this, the relief amount has also been increased to one and half times.

With the aim to bring transparency and improvement in the agricultural marketing sector, to provide farmers better price of their produce and to create a competitive environment, the Government has launched the electronic National Agricultural Market Scheme. The "e-NAM" platform was introduced in 21 markets of 8 States on April 14, 2016. Under the scheme, e-market platform was made available in all 585 regular markets till March 31, 2018 so that along with online trading, issuance of e-permits and

making e-payments, all the activities of the market can be encouraged to acquire digitalization. This system has helped in bringing transparency in the transaction process and provided to farmers an easy access to the markets of the entire country. This has created a conducive environment for farmers to get better price of their agricultural produce and, thus, the country has moved forward in the direction of 'One Nation-One Market'.

Organic farming is being focussed and promoted under 'Paramparagat Krishi Vikas Yojana'. The emphasis is on the maximum use of bio-chemicals, bio-pesticides and bio-fertilizers. Besides promoting expansion in irrigation facilities, horticulture development, agro-forestry, bamboo mission, bee keeping, milk, fish and egg production, special emphasis has been laid on agricultural education, research and development. More investment has been made to strengthen cooperatives. New initiatives have been taken to bring self-dependence in pulses and oilseeds. The contingency plan has been provided to all the districts of the country and by enhancing the relief amount of farmers affected by drought and hailstorms, the interests of the farmers in the economy have been protected and given priority. The emphasis is also on Integrated Farming System. Under this, special attention is given to multi-cropping system, cyclical farming and allied activities such as horticulture, livestock, fishery and bee-keeping. Due to all such initiatives, the farmer is not only able to increase the production for sustainable livelihood, but the effect of drought, flood or other severe natural calamities on him has also been reduced to an extent. Under this system, the emphasis is laid on minimum ploughing, use of crop-residue on soil surface and adoption of crop rotation. These measures have reduced the damage to the fertile soil to the minimum level.

The Government is pushing for extension of micro irrigation facilities. During the year 2017-18, 9 lakh 26 thousand hectare area was brought under the purview of micro irrigation, which is the highest ever for any calendar year. The Government is working to achieve the target of adding to it 1 to 1.5 million hectares per annum by the year 2022-23.



Today, India's Soil Health Card scheme has become a topic of wide discussion all over the world. The Government has implemented the world's largest Soil Health Card scheme to provide feedback to the farmers on the fertility of their agricultural land, on the basis of testing 12 parameters of soil-samples. Arrangements have been made for issuance of soil health cards for all land holdings in the country, in every two years. In the second phase of Soil Health Card scheme, 255.48 lakh samples of soil were collected during 2017-18 to 2018-19, 202.34 lakh samples were tested and 687.59 lakh soil health cards were distributed to the farmers. A study undertaken in this regard has revealed that as per the recommendations related to Soil Health Cards, the use of fertilizers and micro-nutrients has resulted in the reduction of the use of chemical fertilizers by 8 to 10 per cent, whereas the yield of crops has increased by 5 to 6 per cent. On account of neem-coated urea being promoted, the use of urea has, itself got controlled. Its availability has increased for use in the crops and the cost of fertilizers has decreased. The entire quantity of the domestic and imported urea has become Neem coated.

At one point of time, there was a severe shortage of pulses in our country. Due to their high price, they were out of reach of the poor. Today, it is a matter of satisfaction that India has become self-reliant in the production of pulses. As a result, there is no need to import the pulses. In order to meet the requirement of edible oils in the country and enhance the production of oilseeds, activities of National Mission on Oilseeds and Oil Palm are

underway, on a large scale. Various programmes of the Mission are being implemented through State agriculture or horticulture departments.

Agriculture and food security are one of the most important areas for the Government of India. Its main objective is to ensure food and nutrition security at cost-effective prices in an environment-friendly way. Agriculture has much importance in the context of our country, as the majority of our population is still entirely dependent on it for livelihood. Agriculture also contributes significantly to our fast-growing manufacturing sector in terms of supplying raw material. Agriculture sector in India is providing entrepreneurial and employment opportunities to a large number of rural people and youth. It is noteworthy that India has achieved great success and achievement in agriculture and allied sectors as compared to earlier times. During the past decades, the Green Revolution and the White Revolution in India paved the way for self-reliance in food and milk-production. Not only that, we have now moved ahead of self-reliance stage in these areas too. Our performance in the fields of horticulture, fisheries and production of pulses has been exemplary. The goal of our policies and programs is to develop such agricultural techniques, technology and work-system which would ensure food and nutritional security to all citizens and livelihood security to the farming community. Our country, based on the agricultural economy, is currently facing challenges in the form of climate change, shrinkage of land-base, lack of water resources, low availability of agricultural labour and increased costs in national and international markets, volatility and uncertainty in production. Keeping them in view, we have to pay attention to the diversification of those crops and livestock which fetch better price. This will not only improve agricultural income, but also reduce the stress on rapidly dwindling natural resources.

A new central scheme called "Agricultural Mechanization Promotion" has been launched with the aim of decreasing the cost of farming, increasing the crop-yield and management of crop-residues. It is being implemented in Punjab, Haryana, Uttar Pradesh and National Capital Region of Delhi. The focus of this scheme is on in-place management of crop residues. This scheme was announced in the budget of the year 2018. Under this, a total amount of 1151.80 crores will be spent from the Central Fund during the year 2018-19 to 2019-2020. Farmers are

being provided 50 percent of the cost of machinery / equipment as financial assistance for the purchase of machinery on personal basis for management of crop-residues. Besides, financial assistance is also being provided to State Governments, Agricultural Science Centres, institutions affiliated to Indian Council of Agricultural Research, Central Government Institutions and Public Sector Undertakings for activities related to Information, Education and Communication (IEC).

At present, the number of livestock in India is around 30 crore, which is 18 percent of the livestock in the world. This is an important resource for our country. Keeping this in view, efforts are being made to double the productivity of livestock and to add new dimensions to the White Revolution. For this, we have to develop the native cow and buffalo breeds on a big scale. The Government has understood its importance and Rs. 1496 crore have been approved for projects related to conservation and promotion of native breeds in 28 states under the Rashtriya Gokul Mission. Through this, 41 species of native cow breeds and 13 species of buffalo breeds are being conserved and upgraded. Under Gokul Gram Yojana, Rs 196 crore have been approved for 20 Gokul villages in 13 states, out of which 3 Gokul villages have been completed. For the first time in the country, 2 National Kamdhenu Breeding Centres are being set up at the cost of Rs 50 crore for the overall development of indigenous livestock breeds and conservation and upgradation of native breeds. Under the National Livestock Productivity Mission set up at the cost of Rs 825 crore, the work of providing Nakul Swasthya Patra to 9 Million milch cattle is in progress. So far, more than one crore 8 lakh animals have been identified. In order to link breeders of native bovine breeds and farmers, 'e-Pashudhan haat portal' has been set up in November, 2016. The progress of dairy development has also been very encouraging. Today, India is at the first place in milk production and contributes 19 percent of world's total milk production. The availability of per capita milk has also increased significantly in our country. Similarly, as compared to the period from the year 2010 to 2014, the income of dairy-farmers has increased by more than 30 percent during the period from 2014 to 2018. Also, in comparison to the period from the year 2010- 2014, the average milk production has increased by 35.70 percent during the year 2017-18.

Given the abundant capabilities and potential of fishery development, 'Blue Revolution' has been announced in the fisheries sector. Through Blue Revolution, the resolution to make India the world's leading nation in the field of fishery development is being focussed upon. This revolution focuses on increasing fish production through its multi-dimensional activities and aquaculture, inland and sea fishery resources. Under the Blue Revolution, a new scheme called "Deep-Sea-Fishing" has also been initiated. To achieve the objectives related to it, a scheme at the cost of Rs 3,000 crore was announced in December 2015. Under this, efforts will be made to increase the fish production by 2019-20 to the level of 15 million tonnes. More than Rs. 1194 crore have been provided to the States / UTs for implementation of the Blue Revolution scheme during the last four financial years i.e. 2014-15 to 2017-18. The fish production was 126.14 million tonnes, during the year 2017-18, which is 42.22 percent more than the average annual production of 88.69 million tonnes during the year 2010-2014.

There has been an increase of 57% in agricultural production during the last four years of the present Government and it has reached the level of Rs. 11 lakh crore. Interest subsidy has also increased by 1.5 times to reach Rs 15,000 crore. Small Farmers' Agri Business Consortium (SFAC) has constituted 546 Farmer Producers Organizations (FPOs) to increase the income of farmers. The size of Joint Liability Group for landless farmers has increased from 6.70 lakh to 27.49 lakh.

A new export policy has been prepared to infuse competitive spirit in Indian agriculture. Due to the sincere efforts made by the present Government, export of marine products has increased by 95%, that of rice by 85%, fruits by 77%, fresh vegetables by 43% and the export of spices by 38%. The interest of farmers has been protected by imposing duty on imports of oilseeds and pulses.

Due to consistent research in agriculture, 795 new varieties of crops have been released for farmers. These varieties of crops have the ability to withstand the effects of climate change. This will enhance production and thereby increase the income of farmers. Several new colleges of agriculture-education and veterinary-education have been opened, the number of seats and scholarships have also been increased. Innovative technologies developed by the Indian Council of Agricultural

Research (ICAR) have made significant contribution in increasing the production of food-grains, horticulture-products, crops, milk, fish and eggs. Under the Entrepreneurship Development Program, Krishi Vigyan Kendras are helping farmers on various issues related to agriculture through training and technological resources. For better coordination among agricultural scientists and farmers, programs such as 'Farmer First, Mera Gaon, Mera Gaurav', and ARYA' have been started. ARYA (Attracting and Retaining Youth in Agriculture) scheme has proved to be very effective in making the farming an attractive occupation for educated rural youth. "Rural Entrepreneurship Awareness" scheme has also been launched for the students. The success of Government policies and schemes is ratified with the fact that during the year 2017-18, there has been a record production of 284.83 million tonnes of food grains and 306.82 million tonnes of horticulture produce. An increase of 40% was registered in the production of pulses which became 25.23 million tonnes.

In this way, the present Government under the able and dynamic leadership of Prime Minister Shri Narendra Modi, has made tremendous efforts to improve the economic condition of the farmers and to make farming a profitable occupation. And, this is not going to pause here. The Government is fully committed to make the farming an attractive occupation like other major vocations, so that even the highly-educated youth could be motivated/ could get attracted to adopt it as their main source of livelihood. We are confident that the day is not far when agriculture will also acquire the status of a major industry and farmers of our country will be proud of their main occupation i.e., farming. Then, farmer of the village will not migrate to the cities in search of sundry jobs. In his own villages he will get such a livelihood in agriculture or allied fields which would easily fulfil his needs. Thus, by remaining rooted to his land, he will be able to lead a prosperous life in his own village. In fact, the more the agriculture sector grows, the more prosperous will be our farmers and the village and the society will equally move forward. In such a situation, the vision of making our mother-country a developed nation will materialize to a ground reality.

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